

## **REMARKS**

In the Office Action dated July 22, 2004, claims 1-3, 8 and 9 were rejected under 35 U.S.C. §102(b) as being anticipated by Schaaf. A United States patent corresponding to the Schaaf European application has now issued (United States Patent No. 6,777,936) and a copy that United States patent is attached hereto, for use as a translation of the Schaaf European reference.

In the paragraph beginning at column 3, line 25 of the corresponding United States patent, it is stated that the whole-body antenna 30 disclosed in Schaaf is fashioned as a carrier for a mount, with which the movable gradient coil unit 60 can be fixed in at least one position in the radial direction in the examination space. The mount includes fixing devices 70a-70x, which the Examiner characterized as corresponding to the "boom" of claim 1 of the present application. The Examiner further characterized these elements as being extendable in a horizontal direction to insert the gradient coil into the examination space.

This rejection is respectfully traversed for the following reasons.

The gradient coil arrangement in the Schaaf reference is formed by a gradient coil system 20, that is permanently installed in the scanner (Schaaf, United States Patent, column 3, line 5) and a gradient coil unit 60 that is displaceable within at least a portion of the examination space 40. In order to hold the displaceable gradient coil unit 60 at a selected position within the examination space, the whole-body antenna 30 is used as a carrier, however, the whole-body antenna 30 also is permanently installed in the opening of the gradient coil system 20, as stated at column 3, line 10 of the Schaaf United States patent. This is also clearly indicated in

Figures 1 and 2, wherein the double arrow 65 indicates movement only of the gradient coil unit 60, with all other components being permanently installed.

The fixing devices 70a-70x, moreover, are not movable so as to be "extendible in a horizontal direction to insert the gradient coil unit into said examination space," as required in claim 1, but are merely pivotable or rotatable around a central rotational axis, so as to be pivotable out of the way when the gradient coil unit 60 is being displaced, and then being pivotable in an opposite direction to engage the gradient coil unit 60 once it is positioned at a desired location within the examination space 40.

The manner by which the gradient coil unit is movable relative to the examination space 40 is generally described in the paragraph beginning at column 4, line 18 of the Schaaf United States patent, however, no specific details of any structure for actually physically displacing the movable gradient coil unit 60 are described. In the next paragraph, beginning at column 4, line 31, it is stated that the guide system 65 that is used to guide and displace the patient support mechanism 50 can also be used to displace the movable gradient coil unit 60, but no other description is provided as to any type of structure for actually displacing the movable gradient coil unit 60 in the Schaaf apparatus.

In any event, it is clear that neither the carrier 30 nor the fixing elements 70a-70x constitute a "boom" that is extendible in a horizontal direction to insert the gradient coil into the examination space. The carrier 30 is immobile, and the fixing elements 70a-70x are only pivotable, but are not horizontally extendible, and moreover are incapable of displacing the movable gradient coil unit 60, but only serve to fix it in place once it has been displaced to a selected position.

In order to emphasize these points in the language of independent claim 1, claim 1 has been amended to make clear that the movable carrier unit is separate from the scanner and disposed at the exterior of the scanner (although, as set forth in certain of the dependent claims, it can be temporarily docked to the scanner at the exterior of the scanner). The boom in the original language of claim 1 was already stated to be attached to the carrier unit. For the reasons noted above, Applicants submit that the elements in the Schaaf reference cited by the Examiner do not and cannot correspond to the "boom" as set forth in claim 1, however, the language added in claim 1 by the present amendment makes this abundantly clear.

Therefore, neither the Schaaf European application nor the Schaaf United States patent anticipates any of claims 1-3, 8 or 9 under 35 U.S.C. §102(b).

Claims 4-7 were rejected under 35 U.S.C. §103(a) as being unpatentable over Schaaf in view of Mastandrea, Jr. et al. Applicants acknowledge that the Mastandrea, Jr. et al reference discloses a carrier unit having a boom that can be moved (extended) relative to the examination space. In the Mastandrea, Jr. et al reference, however, this boom is the so-called "patient beam" 38, which is a part of the patient bed. Claims 4-7 depend from independent claim 1, and therefore embody the subject matter of independent claim 1 therein. Independent claim 1 as originally filed stated that the boom is mechanically independent of the patient bed. The patient beam 38 in the Mastandrea, Jr. et al reference does not satisfy this language of claim 1, and it would not even be physically possible to mechanically isolate the patient beam 38 from the patient bed, since it is an integral component thereof. The patient bed in the Mastandrea, Jr. et al reference could not function if

the patient beam 38 were mechanically independent of the patient bed, as required in claim 1.


The above arguments relating to the Schaaf reference apply equally to the rejection under 35 U.S.C. §103(a) of claims 4-7. Moreover, even if the Schaaf apparatus were modified in accordance with the teachings of Mastandrea, Jr. et al, for the above reasons the subject matter of claims 4-7 still would not result, in view of the patient beam 38 in Mastandrea, Jr. et al being an integral part of the patient bed.

Claims 4-7, therefore, would not have been obvious to a person of ordinary skill in the field of magnetic resonance apparatus design, based on the teachings of Schaaf and Mastandrea, Jr. et al.

Applicants note with appreciation that claims 10-13 were stated to be allowable if rewritten in independent form, however, in view of the above arguments in support of patentability of independent claim 1, claims 10-13 have been retained in dependent form at this time.

All claims of the application are therefore submitted to be in condition for allowance, and early reconsideration of the application is respectfully requested.

Submitted by,



(Reg. 28,982)

SCHIFF, HARDIN LLP  
**CUSTOMER NO. 26574**  
Patent Department  
6600 Sears Tower  
233 South Wacker Drive  
Chicago, Illinois 60606  
Telephone: 312/258-5790  
Attorneys for Applicants.